IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1.   (Currently Amended)   A method for a packet mode group voice communication in a communications system, comprising

providing a group server <u>layered</u> on top of the ~~said~~ communications system,

providing said group server with individual addresses of group members in at least one group communication group,

sending <u>real-time transfer protocol</u> voice packets from one of said group members to said group server, each <u>real-time transfer protocol</u> voice packet being addressed to said at least one group <u>with a port number,</u>

forwarding said <u>real-time transfer protocol</u> voice packets individually to each receiving one of said group members on the basis of said individual addresses.

2.   (Currently Amended)   A method according to claim 1, wherein said forwarding comprises forwarding said <u>real-time transfer protocol</u> voice packets individually via user servers provided on top of the said mobile communications system, said user servers managing user specific <u>real-time transfer protocol</u> voice packet streams to and from users.

3.   (Previously Amended)   A method for packet mode group voice communication in a communications system, comprising

providing a group server <u>layered on top of the communications system,</u>

providing said group server with individual addresses of group members of a group communication group,

creating an individual logical connection from each group member to said group server by means of outband signaling,

starting a speech item in said group by sending a leader packet from one of said group members to said group server over said individual logical connection, each leader packet containing the identifier of the respective group member,

said group server either i) rejecting said started speech item, or ii) granting the started speech item to said one group member and forwarding said leader packet and subsequent

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voice packets individually to each receiving one of said group members in said group on the basis of said individual addresses.

4.   (Previously Amended) A method according to claim 3, further comprising

allocating an uplink bearer for said one group member in an air interface of said communications system prior to said one group member sends said leader packet and prior to said granting of said speech item, and

allocating a downlink bearer in an air interface for each receiving group member in response to receiving a leader packet forwarded by said group server and addressed to said respective group member.

5.   (Previously Amended)   A method of managing speech items in a communications system having a packet mode group voice communication feature, comprising

providing a group server layered on top of the communications system for serving and configured to serve a group communication group,

granting a speech item to one group member of said group communication group,

setting a first timer to measure a predetermined idle period in response to said granting,

resetting said first timer each time a voice packet is received from said one of said group members to said group server,

ending said granted speech item if said first timer expires indicating that said predetermined idle period has elapsed from said granting or from last reception of a voice packet from said one group member.

6.   (Previously Amended) A method according to claim 5, further comprising

ending said granted speech item if a maximum allowed period of time has elapsed from the granting.

7.   (Previously Amended) A method according to claim 5, further comprising

said one group member sends a trailer packet having a predetermined payload in order to indicate the end of sending,

the group server ends said speech item in response to receiving said trailer packet.

8.   (Previously Amended)   A method of managing traffic streams in a communications system having a packet mode group voice communication feature, comprising

providing a server layered on top of the communications system for managing and configured to manage traffic streams addressed to a user who is active in at least one group communication group or in a one-to-one communication,

receiving at said user specific server a first voice packet stream related to a first group or one-to-one communication and forwarding said first voice packet stream to said respective user,

monitoring at said user specific server continuity of said first voice packet stream,

receiving at said user specific server at least one further voice packet stream related to at least one further group or one-to-one communication,

forwarding no one of said at least one further voice packet streams to said user if said first voice packet data stream is continuous,

forwarding one of said at least one further voice packet streams to said user if said first voice traffic stream has been discontinued for a predetermined period of time.

9.   (Previously Amended)   A method according to claim 8, wherein said monitoring further comprises

setting a timer to measure said predetermined period of time when a first packet of said first voice packet stream is forwarded to said user,

resetting said timer each time a new packet of said first voice packet stream is forwarded to said user,

determining said first voice packet stream to be discontinued if said timer expires.

10.   (Previously Amended)   A method according to claim 8 or 9, said method further comprising

interrupting said first voice packet stream immediately when a voice packet stream having higher priority is received at said server.

11.   (Currently Amended)   A server system for providing a packet mode group communication service for a communications system, said server system comprising a group

server provided <u>on a layer</u> on top of said communications system, said group server further comprising<u>:</u>

a data memory storing individual addresses of group members in at least one group communication group,

<u>said group server being configured to receive</u> a̶ ̶m̶e̶c̶h̶a̶n̶i̶s̶m̶ ̶r̶e̶c̶e̶i̶v̶i̶n̶g̶ voice packets from said group members, each received voice packet containing information identifying the communication group which the respective packet is addressed to,

<u>said group server being configured to grant</u> a̶ ̶m̶e̶c̶h̶a̶n̶i̶s̶m̶ ̶f̶o̶r̶ ̶granting a speech item to one group member per a communication group in turn,

<u>said group server being configured to unicast</u> a̶ ̶m̶e̶c̶h̶a̶n̶i̶s̶m̶ ̶u̶n̶i̶c̶a̶s̶t̶i̶n̶g̶ each voice packet received from said group member having a speech item in a group communication group separately to each receiving member in said respective group communication group on the basis of said individual addresses.

12.   (Original) A server system according to claim 11, wherein said information identifying the communication group identify a port assigned to said group in said group server.

13.   (Original) A server system according to claim 11, further comprising

a call processing server provided on top of said mobile communications system, said call processing server being responsible for control plane management of the group communications in said group server.

14.   (Currently Amended) A server system according to claim 11, wherein said <u>group server configured to grant</u> m̶e̶c̶h̶a̶n̶i̶s̶m̶ ̶granting a speech item further comprises

a first timer responsive to said granting the start of the measurement of a predetermined idle period from said granting,

<u>said group server being configured to reset</u> a̶ ̶m̶e̶c̶h̶a̶n̶i̶s̶m̶ ̶resetting said first timer each time a voice packet is received from said one group member having said granted speech item,

<u>said group server being configured to end</u> a̶ ̶m̶e̶c̶h̶a̶n̶i̶s̶m̶ ̶ending said granted speech item if said first timer expires indicating that said predetermined idle period has elapsed from said granting or from the last reception of a voice packet from said one group member.

15.   (Currently Amended) A server system according to claim 13, wherein said call processing server system further comprising a mechanism establishing is configured to establish an individual logical connection from each group member to said group server by means of outband signaling carried out between said call processing server and each group member, and wherein said group server configured to grant mechanism granting a speech item further comprises

said group server being configured to receive a mechanism receiving a leader packet starting a speech item in said group from one of said group members to said group server over respective said individual logical connection, said leader packet containing identifier of the respective group member,

said group server being configured to a mechanism that either i) reject said started speech item, or ii) grant said started speech item to said one group member and forward said leader packet and subsequent voice packets individually to each receiving one of said other members in said group on the basis of said individual addresses.

16.   (Original) A server system according to claim 11, wherein said voice packets are VoIP packets.

17.   (Original) A server system according to claim 11, said server system further comprising group management server providing a user interface for a remote creation and management of group communications group in said server system.

18.   (Original) A server system according to claim 17, wherein said user interface is based on one of the World Wide Web (WWW) and Wireless Application Protocol (WAP) technologies.

19.   (Original) A server system according to claim 11, wherein said group server is interconnected to said mobile communications network by an Internet Protocol (IP) based network.

20.   (Currently Amended) A server system for providing a packet mode group communication service for a communications system, said server system comprising a group

server provided <u>on a layer</u> on top of said communications system, <s>said group server further comprising</s> wherein

said group server is configured to a mechanism which identifies <u>identify</u> and <s>authenticates</s> <u>authenticate</u> a source of group communication,

said group server is configured to <s>a mechanism which controls</s> <u>control</u> that only one group member in a group talks at a time,

said group server is configured to <s>a mechanism which checks</s> <u>check</u> active group members in a group to which voice packets from a previously talking group member are destined to and generate from an incoming voice packet an outgoing packet to be forwarded separately to each of said active group members, and

said group server is configured to <s>a mechanism which selects</s> <u>select</u> one traffic stream among <s>from</s> possible multiple incoming traffic streams destined to one group member <u>and to</u> <s>the one which is to be forwarded</s> <u>forward the selected traffic stream</u> to said one group member.

21. (Currently Amended) A server system for providing a packet mode group communication service for a communications system, said server system comprising<u>:</u>

at least one first server <u>provided on a layer on top of the communications system and</u> <s>providing</s> <u>configured to provide</u> group specific communications functions, <s>said first server further comprising</s>

said first server further comprising a data memory storing individual addresses of group members in at least one group communication group,

said first server being configured to receive <s>a mechanism receiving</s> voice packets from said group members, each received voice packet containing information identifying the communication group which the respective packet is addressed to,

said first server being configured to grant <s>a mechanism for granting</s> a speech item to one group member per communication group in turn,

said first server being configured to unicast <s>a mechanism unicasting</s> each voice packet received from said group member having a speech item in a group communication group separately to each receiving member in said respective group communication on the basis of said individual addresses,

a second server providing user-specific communications functions, any group related communication from a user managed by said second server being routed first to said second

server and then forwarded to an appropriate first server, and any unicast voice packet from said at least one first server being routed first to said second server prior to sending the voice packet to the respective user.

22.   (Original) A server system according to claim 21, wherein said information identifying the communication group identify a port assigned to said group in said group server.

23.   (Currently Amended) A server system for providing a packet mode group communication service for a communications system, said server system comprising:

at least one group server provided on a layer on top of the communications system and providing configured to provide group specific communications functions, said group server further comprising

said group server being configured to control a mechanism which controls that only one group member in a group talks at a time,

said group server being configured to check a mechanism which checks active group members in a group to which voice packets from a currently talking group member is destined to and generates from an incoming voice packet an outgoing packet to be forwarded separately to each of said active group members,

a user server providing user-specific communications functions on a user plane, said user server further comprising

said user server being configured to identify a mechanism which identifies and authenticate a source of group communication,

said user server being configured to select a mechanism which selects one traffic stream among from possible multiple incoming traffic streams destined to one group member and to forward the one which is to be forwarded the selected traffic stream to said one group member.

24.   (Original) A server system according to claim 23, said system further comprising

a group call processing server provided on top of the said communications system, said group call processing server being responsible for control plane management of the group communications in said group server, and

a user call processing server provided on top of said communications system, said user call processing server being responsible for control plane management of the communications in said user server.

25.   (Currently Amended) A server system according to claim 23, wherein said group server configured to manage a mechanism which manges that only one group member in a group talks at a time further comprises

a first timer responsive to a grant of a speech item for starting to measure a predetermined idle period from said granting,

said group server being configured to reset a mechanism resetting said first timer each time a voice packet is received from said one group member having said granted speech item,

said group server being configured to end a mechanism ending said granted speech item, if said first timer expires indicating that said predetermined idle period has elapsed from said granting or from last reception of a voice packet from said one group member.

26.   (Currently Amended) A server system according to claim 23, wherein said user call processing server is configured to establish system further comprising a mechanism establishing an individual logical connection between each group member and said user server by means of outband signaling carried out between said user call processing server and each group member, and wherein said group server configured to manage a mechanism which manages that only one group member in a group talks at a time further comprises

said group server being configured to receive a mechanism receiving a request for a speech item in said group from one of said group members to said group server over respective said individual logical connection, said request being in form of a leader packet containing identifier of the respective group member,

said group server being configured to a mechanism that either i) reject said request for a speech item, or ii) grant the speech item to said one group member and forward said leader packet and subsequent voice packets individually to each receiving one of said other members in said group.

27.   (Original) A server system according to claim 23, wherein said voice packets are VoIP packets.

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28.   (Original) A server system according to claim 22, said server system further comprising group management server providing a user interface for a remote creation and management of group communications group in said server system.

29.   (Original) A server system according to claim 28, wherein said user interface is based on one of the World Wide Web (WWW) and Wireless Application Protocol (WAP) technologies.

30.   (Original) A server system according to claim 23, wherein said group server is interconnected to said mobile communications network by an Internet Protocol (IP) based network.

31.   (Currently Amended) A server system for providing a packet mode group communication service for a communications system, said server system comprising:

at least one group server provided on a layer on top of the communications system and providing configured to provide group specific communications functions in a user plane, said group server further comprising

a data memory storing individual addresses of group members in at least one group communication group in said group server,

said group server being configured to receive a mechanism receiving voice packets from said group members, each received voice packet containing information identifying the communication group which the respective packet is addressed to,

said group server being configured to grant a mechanism for granting a speech item to one group member per communication group in turn,

said group server being configured to unicast a mechanism unicasting each voice packet received from said group member having a speech item in a group communication group separately to each receiving member in said respective group communication on the basis of said individual addresses,

a user server providing user-specific communications functions on a user plane, any group related communication from a user managed by said user server being routed first to said user server and then forwarded to an appropriate group server, and any unicast voice packet from said at least one group server being routed first to said user server prior to sending the voice packet to the respective user,

a group call processing server responsible for control plane management of the group communications in said group server, and

a user call processing server responsible for control plane management of the communications in said user server.

32.   (Currently Amended)   A device ~~of~~ for managing speech items in a communications system having a packet mode group voice communication feature, comprising

said device being configured to grant ~~a mechanism granting~~ a speech item to one group member in group communication group at time,

a first timer responsive to said granting for starting to measure a predetermined idle period from said granting,

said device being configured to reset ~~a mechanism resetting~~ said first timer each time a voice packet is received from said one of said group members,

said device being configured to end ~~a mechanism ending~~ said granted speech item, if said first timer expires indicating that said predetermined idle period has elapsed from said granting or from last reception of a voice packet from said one group member.

33.   (Currently Amended) A device for managing traffic streams addressed to a user who is active in at least one group communication group or in one-to-one communication in a mobile communications system having a packet mode group voice communication feature, said device comprising:

said device being configured to receive ~~a first mechanism capable of receiving~~ at least two voice packet streams related to at least two group or one-to-one communications,

said device being configured to monitor ~~a second mechanism monitoring~~ continuity of said forwarded voice packet streams,

said device being configured to forward ~~a first mechanism forwarding~~ no other one of said received voice packet streams related to at least one further group or one-to-one communication, if said first voice packet stream is continuous, and to select ~~selecting~~ and ~~forwarding~~ forward other one of said voice packet streams to said user if said previous selected and forwarded voice traffic stream has been discontinued for a predetermined period of time.

34.   (Currently Amended)   A device according to claim 33, ~~wherein said monitoring mechanism further comprises~~ further comprising

a timer which is set to measure said predetermined period of time when a first packet of said selected voice packet stream is forwarded to said user,

said device being configured to reset ~~a mechanism resetting~~ said timer each time a new packet of said selected voice packet stream is forwarded to said user,

said device being configured to determine ~~a mechanism determining~~ said selected voice packet stream to be discontinued if said timer expires.

35.   (Currently Amended)   A device according to claim 33, said device being configured to interrupt ~~further comprising a mechanism interrupting~~ said first voice packet stream immediately when a voice packet stream having higher priority is received.

36.   (Currently Amended)   A method for establishing a one-to-one voice communication in a communications system, comprising

providing a communication server layered on top of a mobile communications system,

creating an individual logical connection between said communication server and each user having an active communication service in said communication server,

starting a communication by sending a leader packet from a sending user to said communication server over respective said individual logical connection, each leader packet containing an identifier of said sending user and a receiving user,

said communication server either i) rejects said started speech item, or ii) grants the started speech item to said sending user and forwards said leader packet and subsequent voice packets to said receiving user on the basis of said received identifier of said receiving user.

37.   (Previously Amended)   A method according to claim 36, wherein said forwarding further comprises

inquiring an IP address of said receiving user from a communication control server on the basis of said received identity of said receiving user,

forwarding said leader packet and subsequent voice packets to said IP address of said receiving user.

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38.   (Original) A method according to claim 36, wherein said sending user sends the leader packet and the subsequent packets to a specific port assigned for one-to-one communication in said communication server.

39.   (Currently Amended) A subscriber equipment for communications system having a packet mode group voice communication service, said subscriber equipment comprising

said subscriber equipment being configured ~~mechanism~~ for packet data communication over said mobile a communications system,

a group communication application layered on top of said packet data communication ~~mechanism~~,

said application being configured to establish ~~having a mechanism establishing~~ a logical packet connection to a group communication server,

said application being configured to send ~~having a mechanism sending~~ and ~~receiving~~ receive voice packets to and from said group communications server.

40.   (Currently Amended) A subscriber equipment according to claim 39, said equipment further comprising

a push-to-talk switch,

said subscriber equipment being configured ~~a mechanism which~~, reactive to activation of said push-to-talk switch by a user, to send [[sends]] a leader packet followed by voice packets to said group communication server over said logical connection and thereby starts a speech item,

said subscriber equipment being configured ~~mechanism~~, reactive to receiving an indication that a speech item is not granted to the user is received from said group communication server after sending said leader packet, to stop sending further packets and stop the speech item although the push-to-talk switch is still activated,

said subscriber equipment being configured mechanism, reactive to deactivation of said push-to-talk switch by the user, to stop [[stops]] the speech item and stop sending further voice packets.

41.   (Currently Amended) A subscriber equipment according to claim 40, wherein said-subscriber equipment being configured ~~mechanism~~, reactive to deactivation of said

push-to-talk switch by the user, to send [[sends]] a trailer packet to said group communication server over said logical connection and thereby stop the speech item.

42.   (Original)   A subscriber equipment according to claim 40, wherein said indication is a reception of a voice or leader packet originating from another user in a group communication group after sending said leader packet.

43.   (Original)   A subscriber equipment according to claim 40, wherein said indication is the reception of a voice packet having predetermined payload type after sending said leader packet.

44.   (Currently Amended)   A subscriber equipment according to claim 40, wherein said subscriber equipment is configured comprising a mechanism, which in response to the reception of said indication, alert the user of the fact the speech item was not granted.

45.   (Currently Amended)   A subscriber equipment according to claim 40, wherein said subscriber equipment is configured mechanism, reactive to deactivation of said push-to-talk switch by the user, sends a trailer packet to said group communication server over said logical connection and thereby stops the speech item.

46.   (Currently Amended)   A subscriber equipment according to claim 40, wherein said subscriber equipment further comprising is configured to a mechanism giving give an audible indication to the user start speaking after the activation of said push-to-talk switch.

47.   (Currently Amended)   A subscriber equipment according to claim 46, wherein said indication mechanism comprises comprising a timer enabling said audible indication after a predetermined period of time has expired from said activation of said push-to-talk switch.

48.   (Currently Amended)   A subscriber equipment according to claim 46, wherein said subscriber equipment is configured to give indication mechanism gives said audible indication after one of the connection setup phases has been reached; 1) after an uplink bearer has been allocated, 2) after said leader packet has been sent, 3) after said group

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communication server has processed said leader packet and granted a speech item, 4) after a

receiving party has acknowledged said leader packet.